THE ART OF ARCHITECTURAL PHOTOGRAPHY

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ILLUSTRATIONS OF PHOTOGRAPHS

INTRODUCTION

Like many other fields of photography, architectural photography is a visual way of communication. Architectural photography can be used for advertising or for documentation purposes like the surveying of buildings.

Architectural photography has its own complexities. In one situation the photograph will be considered as architectural and in the other not architectural, for example when a photograph of a group of buildings is labled "city scape" instead of architectural photography.

Architectural photography can be defined as such when the primary objective is straight forward documentation of a subject which was conceived or designed by an architect.

A famous architectural photographer, Norman McGrath, said that there are a few dimensions in architectural photography to be explored: "Aesthetics, imagination, abstraction, reality, emotion, harmony, relationships, drama, time, humanism and honesty. Mastery of the

practical aspects of creating photographs of architectural subjects would open the door to these more philosophical elements." (Photographing buildings inside and out, Norman McGrath).

1. HISTORY OF ARCHITECTURAL PHOTOGRAPHY

The publication of J.L.M. Daguerre and Henry Fox Talbot's photographic processes in 1839 opened up unprecedented possibilities for making images. Architecture was an ideal subject to photograph and unlike most other subjects "sat" patiently for the long exposures required by early emulsions.

The first two decades of early photography consisted mainly of architecture. Hippolyte Bayard, Gustave Le Gray, Henri Le Secq, Charles Negre and Roger Fenton were among those who developed new kinds of photographic visions that were to have considerable impact on architectural photography.

The approach of photographers began to emerge around 1851. The most critical technical problem in photographing architecture was already beginning to be solved. It has been noted that the soft, sketch like quality of the early calotype was prized by photographers with a taste for the romantic. The paper fibres of the negative that produced this effect interfered with the crisp resolution of detail

in the print needed for architectural photography, which the daguerreotype had established as one of the best features of the new medium. By 1851 Gustave Le Gray's waxed-paper version of the calotype negative was in use. The wax suppressed the fibres so that they were not apparent in the prints. In the same year Frederic Scott Archer's wet-collodion process, which used a glass plate as an emulsion support, laid the resolution problem to rest.

Architectural photography came of age in 1851, twelve years after the processes of Daguerre and Talbot. Not only were the means available to make crisp high resolution prints, but other factors emerged that made architectural photography a viable profession rather than an experimental art form. (A history of the photography of buildings from 1839 to the present, Cervin Robinson, Joel Herschman).

The first two photographs that were published used the same technique namely a waxed-paper calotype negative printed on albumen paper. The first photo was taken by Edouard Baldus of a famous Paris monument, Jacques-François Blondel's Porte Saint-Dennis before 1856 and the second by and unknown photographer. (IBID).

To prevent the distortion which would have been caused by the limited movements possible to the cameras, Baldus took the photo from an upper window of a facing building which brought the photographic equivalent of the vanishing point as close as possible to the centre of the building. By this he ensured that the proportions were accurately reproduced in the photograph. Only the barest hint of depth could be seen and the lighting was chosen to enhance the effect of flattering. The sun's position reduced the shadows to a network of lines like those drawn with a pen. The photograph's overall appearance was sharp and the highlight showed no detail. (Figure 1. p.13). (IBID).

Figure 2. p.14

The photographer took this shot by aiming at the corner of the building. The corner view brought out the three dimensional form of the arch, which was enhanced by the lighting. The sun's angle brought out the texture of the stone and created shadows suggesting depth of both the architectural carving and the relief sculpture. The light also modelled the inner curve of the arch so as to convey the

possibility of passing through it. A strong diagonal of fences defines the foreground and is underlined by the wagon parked next to it. (IBID).

The diagonal perspective lines lead the eye along the boulevard and tie the facades of the surrounding buildings into composition.

Between the time of 1839 and 1880, many architectural photographs were done mostly for the use of surveys and most of the prints were albumen silver prints.

In the 1890's the photographers turned away from the factual style. They were inclined to give a more fragmentary and experiential view of their subjects. They also began systems like the calotype and the photogravure. These reproduction systems produced an exaggerated contrast at the edges between tones in a picture.

During this time photographers began shooting from the pavement level rather than climbing to an upper window. They started using a rising front to drop the horizon. Other changes that also occurred, were the

use of wide angle perspective lenses as well as faster lenses like the Zeiss Tessar; cameras were used on tripods and not hand-held; reflex finders with through-the-lens metering and halftone and platinum prints were used. (IBID).

Platinum paper was intended to provide a print material more permanent than silver. Its physical character was similar to early photogravure, but it had certain disadvantages, for example the quality was not up to standard, since it did not require the special papers of other processes and halftones were difficult to reproduce.

During the 1930's and 1970's professional work was marked by the use of large (eight-by-ten inch) cameras while amateurs used small cameras.

A new style of architectural photography developed and was illustrated by photos done by photographers such as Walker Evans and Ken Hedrich. The next two photographs shown are examples of the new style. (Figures 3 and 4 p. 16).

The photograph of Walker Evans shows a timber building that appears head on and very much in the manner of the

eighties except that the sides of the building are brought close to the edges of the picture frame. In front of the house is a Ford Model T. The picture seems to point out the resemblance between the car and the house. The important thing in this picture is that neither the car nor the building plays a secondary role. (Figure 3. p. 16).

Figure 4. p.16

The perspective of this building gives a more dynamic air, emphasized by the bold use of glass on the façade. In the foreground (left side) is the front end of a new Dodge automobile the purpose of which is partly to enliven the space in front of the building and partly to serve a metaphor: the car is the latest in streamlined design and the building is a comparably exciting and up-to-date design. The car leads the eye in the direction of the building and suggests to us the similarity of dynamic modernism between it and the building.

Superficial changes brought about by new photographic technology were easy to see. Eight-by-ten cameras which had the quality of the professional were used and as the years went by the architectural photographs improved more and more.

Photographers who flourished in this time were people like Norman McGrath, Julius Shulman, Ezra Stoller, etc. The following are photographs taken by them. (Figures 5-8 pp.18 and 20).

Photographers and editors would have finished the seventies as they had begun them and gone onto the eighties fine tuning a language of photojournalism that had reached maturity in the sixties. But two influences made this impossible. One was the return of artist photographers to architecture as a subject and the sudden market for their pictures in galleries and museums. The other was a successful pressure on magazines by advertisers. Their pressure, supported by improvements in reproduction technology resulted in the use of more colour pictures on editorial pages. This was beneficial not only to advertisers but to architects and photographers as well. Colour was to prove seductive.

Because black and white pictures tend to make space look smaller and more cluttered, an interior would be arranged to create a special effect, to look much as it would appear in use like the photograph of Richard Einzig. (Figure 9. p. 22).

In America, photographers adapted their perspectives to suit the needs of changing architecture, each photographer doing so in his own manner. Those who photographed "for themselves" never entirely abandoned architecture as a subject.

The subject of new buildings was not so wholeheartedly embraced by photographers of the seventies as that of older architecture. Few buildings could be shown only if kept at arm's length.

Technology was clearly present in photography. Film speeds doubled about every ten years. The use of colour pictures became virtually universal in part because the technology of colour reproduction improved while printers lowered the quality of Black and White reproductions and in part because colour was a seductive medium that advertisers encouraged journals to use on their editorial pages. In the late seventies and early eighties, its use seemed to have been most successful, not where the materials of a building were either brightly or subtly coloured, but where colour film could distinguish between special qualities of light. (IBID).

In the same years architects turned increasingly to designing interiors, and taking pictures of them became an attractive speciality to photographers. One of the more skillful of these specialists was Jaime Ardiles-Acre who, with his light shining up through plant leaves and with lens characteristically thrust next to chairs and plants, could leave his own mark on even an interior. (IBID).

The evocative sense of ephemeral light that colour photographs can give does not survive translation onto black and white. Pictures can only illustrate other qualities that in their transience are comparable to that of light in colour pictures.

Thus a medium that had seemed through the sixties to provide an increasingly articulate language for describing the built world, appears in the eighties to have gone back to its point of departure - to describing qualities of light more than those of architecture. One of the great ages of visual discovery discovered that it is certainly likely that before long photographs will again take a fresh, hard, objective look at architecture. (IBID).

Figure 1

EDOUARD - DENNIS BALDUS

Paris, Porte Saint-Dennis, ca. 1856

Albumen Silver Print

Collections of Bibliothéque

Nationale

Figure 2

PHOTOGRAPHER UNKNOWN

Paris, Porte Saint-Dennis

From Paris Photographique (1851 - 1853)

Albumen Silver Print

Collections of the Bibliothéque

Nationale

Figure 1

Figure 2

Figure 3

Walker Evans

Westchester, farmhouse, 1931

The estate of Walker Evans

Figure 4

Ken Hedrich

Detroit, Dodge Half Ton Truck Plant

exporting building, 1938

courtesy Hedrich - Blessing

Figure 3

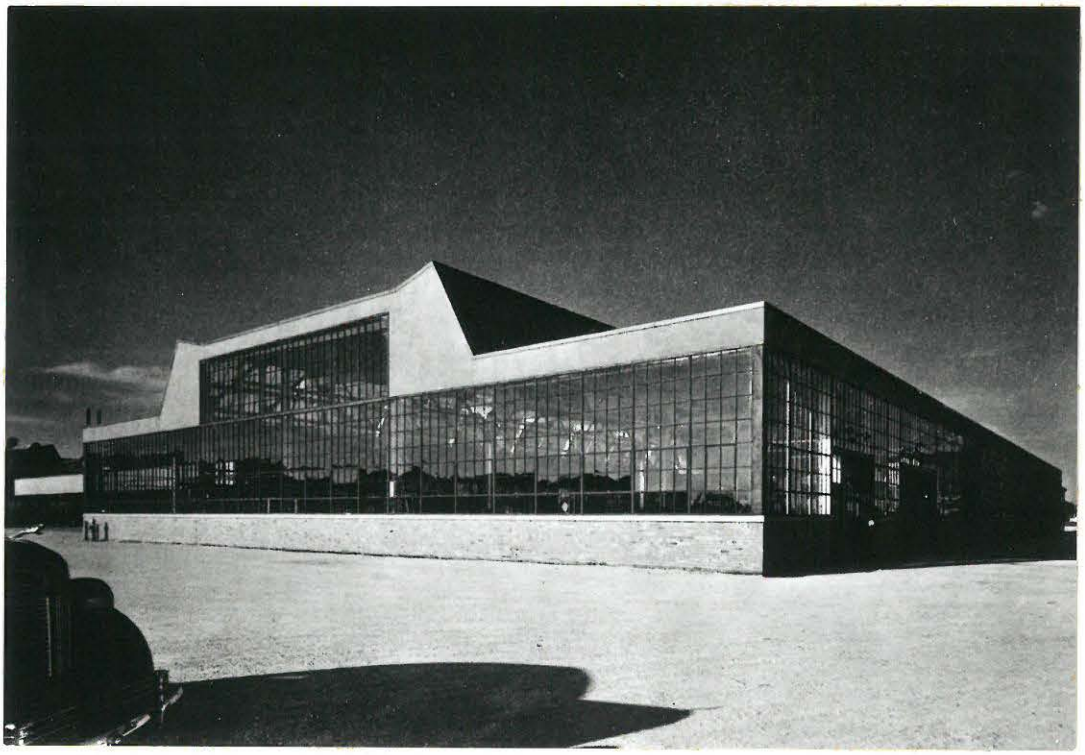

Figure 4

Figure 5

NORMAN McGRATH

Chantilly, Dulles Airport, ca. 1969

Courtesy the photographer

Figure 6

JULIUS SHULMAN

Palm Springs, Kaufmann house, 1947

Courtesy the photographer

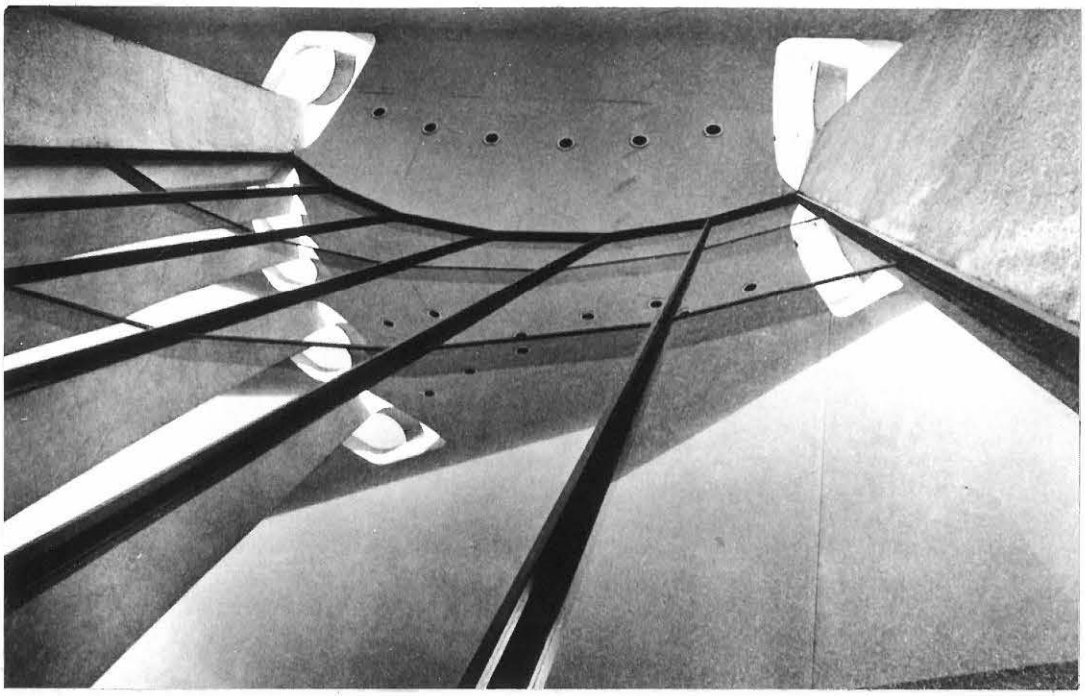

Figure 5

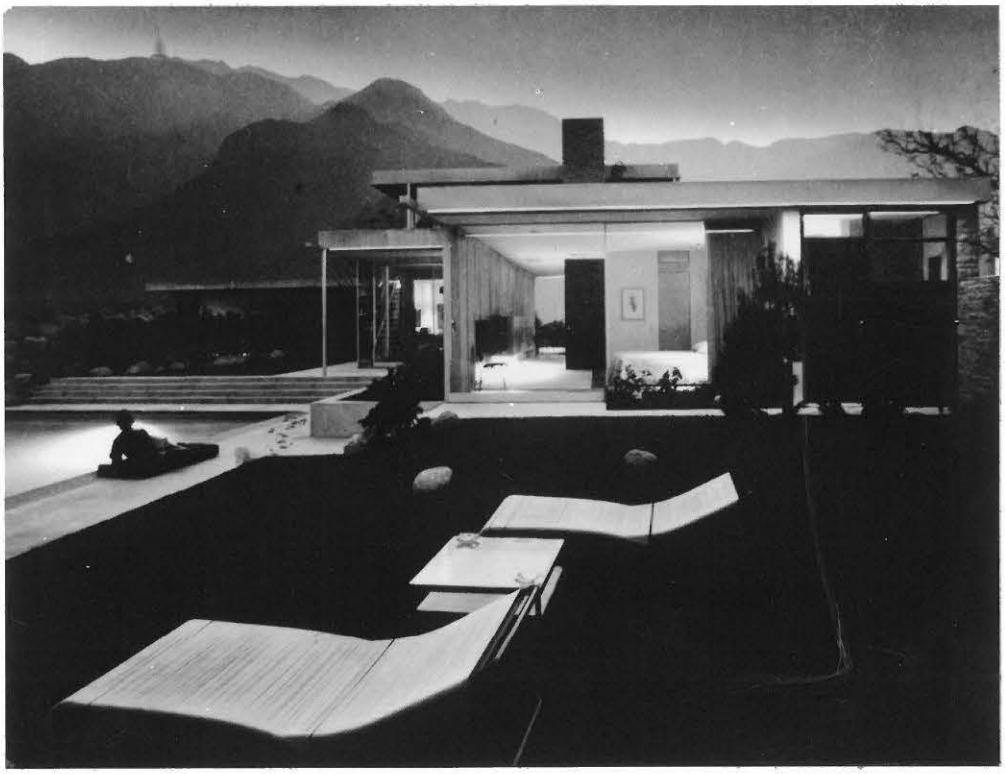

Figure 6

Figure 7

JULIUS SHULMAN

Los Angeles, Dodge house, 1954

Courtesy the photographer

Figure 8

EZRA STOLLER

Sarasota, Cocoon house, 1951

Courtesy the photographer

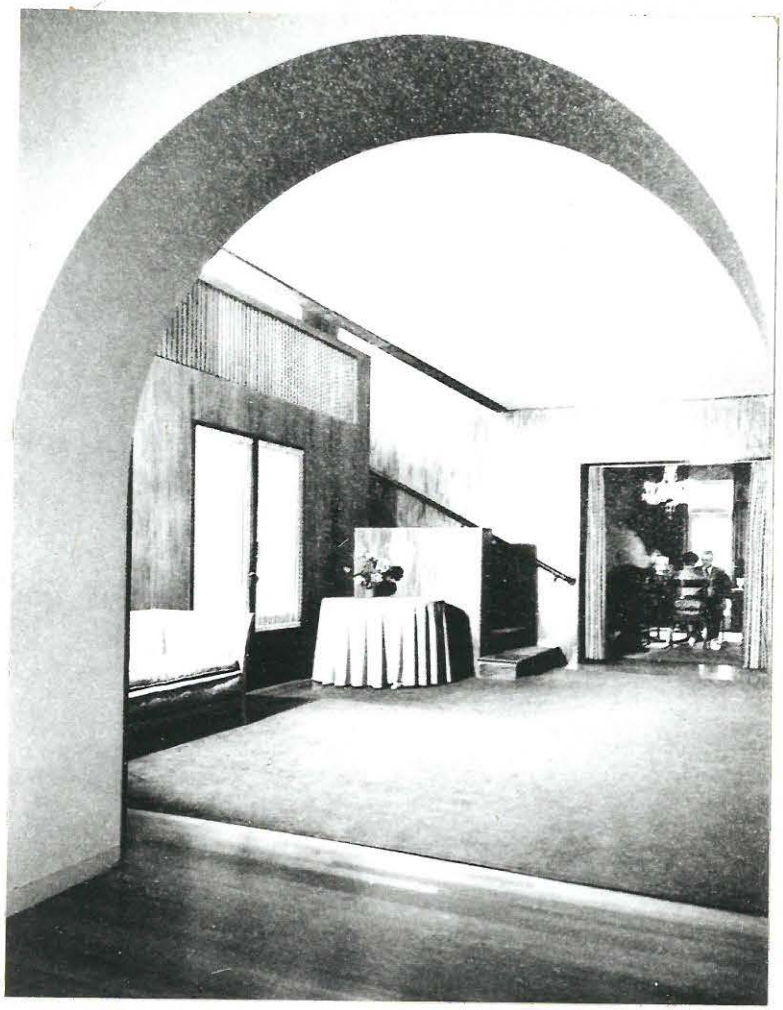

Figure 7

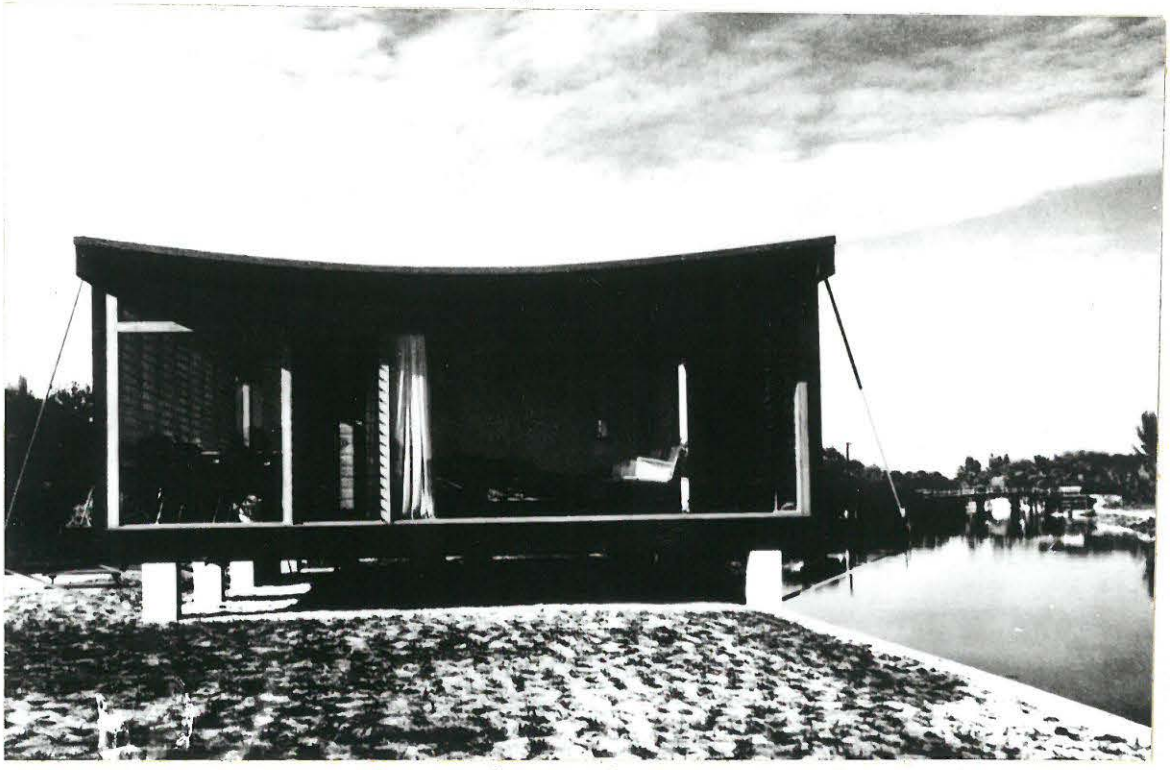

Figure 8

Figure 9

RICHARD EINZIG

Camden Town, studio, 1974

Courtesy the photographer

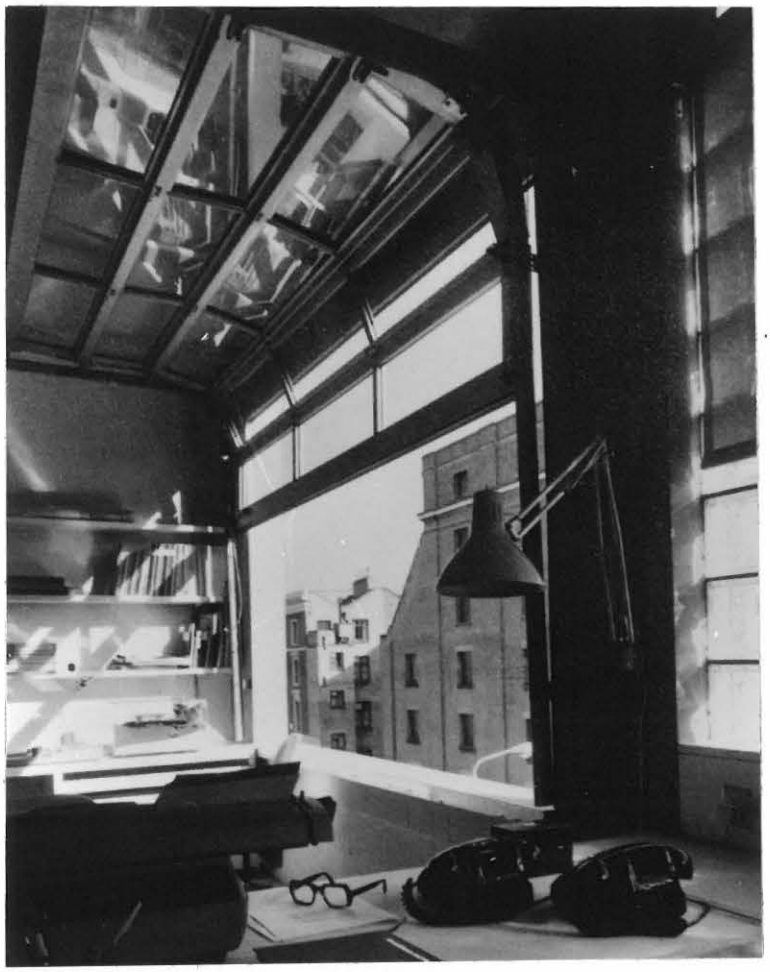

Figure 9

2. EQUIPMENT

2.1 CAMERAS

Equipment such as the 35 mm camera systems; 120 roll film camera systems and viewcameras can be used.

2.1.1 THE 35mm CAMERA SYSTEMS

There are currently an astonishing array of sophisticated 35 mm cameras on the market. Architectural photographers can substantially reduce this list by eliminating brands with limited accessories and, most important, too few available wide angle lenses. The best advice is to have a high quality camera system that incorporates a good range of wide-angle lenses. Some of the best systems include: Ricoh, Minolta, Nikon, Canon.

The top manufacturers offer a variety of models for different purposes, some models being more suitable than others for interior and architectural work. The camera that is used must be sturdy and reliable, and be

able to perform in a wide variety of situations without problems.

When photographing architectural work it is better to have two camera bodies for convenience as well as "insurance". Having two camera bodies permits the use of daylight film as well as tungsten balanced, a black and white, or a colour negative film simultaneously. The second body should be compatible with the first so that their lenses are interchangeable.

2.1.2 THE 120 ROLL-FILM CAMERA SYSTEM

The variety and styles of current 120 film cameras are greater now than the 35 mm field. The frame sizes of cameras using 120 roll-film vary greatly: 6 x 3.5 cm, 6 x 4.5 cm, 6 x 6 cm, and 6 x 7 cm. The last size is the ideal format because it has the same proportions as the 4 x 5.

The Mamiya RB67 doubles the negative size to 6 x 7 cm and is a multi-feature camera. With a wide range of accessories, including interchangeable film magazines, this is a versatile piece of equipment with an enthusiastic following. Compactness however is not its major attribute.

Another ideal format is the Pentax 6 x 7 cm. This camera looks like a scaled-up 35 mm camera and is similarly easy to handhold. Its mechanism is entirely electronic. Disadvantages of this camera is that it is not lightweight and it makes quite a resounding "clunk" when the shutter is released.

2.1.3 VIEWCAMERA

The architectural photographer's basic tool and first choice is the viewcamera. Consisting essentially of a monorail supporting a front standard on which the lens is mounted and a back standard containing a groundglass for viewing, the viewcameras have flexible bellows connecting the two standards which permits extremely precise placement of the lens in relation to the film plane. Focusing is achieved simply by moving the standards until the image of the subject appears sharp on the groundglass.

The viewcamera is much less complex than the 35 mm SLR camera. It offers an unparalleled opportunity to control the lens-to-film-plane relationship and thereby the image, enabling the photographer to manipulate shape and limit distortion on the groundglass.

A viewcamera should be set on a tripod. In order to view the image on the groundglass, it must be shielded from any strong light (A black cloth or a viewfinder is used to cover the groundglass).

The viewcamera's front and back standards can be shifted up, down and laterally, tilted forward and backward, and swiveled from side to side. These movements are called the rise and fall, the shift, the tilt and the swing, and they allow the photographer to adjust the size and the shape of the objects in the image according to the assignment objective.

The camera that has long been the standard for quality among the publishers of interiors and architectural design is the 4 x 5 viewcamera. Shooting in this format is directly related to obtaining superior print quality. Good reproduction is easier to achieve; for example, an 8 x 10 print requires on 2:1 enlargement from a 4 x 5 negative, but 8:1 enlargement from a 35 mm negative. The tonal values from the larger negative have a much extended range.

Very few professional architectural photographers use the 5 x 7 or the 8 x 10 formats because they are

cumbersome for location work. The place for the 8 x 10 camera is the studio.

2.2 LENSES

2.2.1 THE 35 mm CAMERAS

For architectural photography the non-automatic perspective-control (PC) lenses are a great advantage.

Only the following 35 mm camera manufacturers offer perspective control lenses specifically designed for architectural use: Nikon, Minolta, Canon, Pentax, Zeiss for Contax and Olympus.

A perspective-control lens, sometimes called a shift lens, enables the 35 mm photographer to offset the lens either horizontally or vertically or a combination in relation to the film plane. This rise, fall, or lateral shift of the lens gives a 35 mm camera some of the perspective-control advantages of a view-camera.

Other lenses that are extremely useful in 35 mm camera systems are the 28 mm and the 24 mm.

2.2.2 THE 120 ROLL-FILM CAMERA

It has a good range of wide angle lenses starting at 45 mm focal length, (Pentax 6 x 7), a 55 mm lens and a 75 mm PC.

Long focal-length lenses are also available. Through-the-lens exposure metering is provided along with an interchangeable viewfinder.

For limited applications, there is an excellent full-frame fisheye lens.

In the case of the Mamiya RB 67 it also has a good range of wide-angle lenses, like the 50 mm, 65 mm and the 90 mm. Long focal-length lenses are also available.

2.2.3 VIEWCAMERAS

The choice of lenses for viewcameras are more critical than the choice of camera. A photographer needs the best lenses affordable and with care they will last indefinitely.

The most frequently used lenses that some photographers use are the Super Angulon 90 mm f5.6 made by Schneider, followed by the 120 mm and the 75 mm. These focal lengths are approximately equivalent to the 28 mm, 35 mm and the 24 mm lenses for a 35 mm camera and cover most of the photographic situations.

Other lenses that are also used for the 4 x 5 camera are the 135 mm, 65 mm, 90 mm and the 75 mm. It is always handy to have with you a lens of longer focal-length like the 135 mm, 150 mm and the 240 mm.

2.3 EXPOSURE METERS

Many 35 mm cameras have built-in systems for determining and setting correct exposures. Working on a small format a photographer could rely on his built-in meter. But it is better to rather have a separate exposure meter.

An exposure meter should be able to determine exposures that vary from snow scenes in bright sunlight, to dimly lit interiors with dark surfaces, and to night scenes. The degree of sensitivity should be combined with a broad range of film speeds to accommodate the fastest films now available. The meter must be able to take incident and reflected light readings.

The top manufacturers of exposure meters are Minolta, Gossen and Sekonic. They sell a wide range for all purposes. Good spotmeters are also produced by Pentax.

2.4 FILM

The four basic categories of film that can be used in architectural work are: Black and White film, Colour transparency film, Colour negative film and Polaroid film.

Photographers use different types of film according to personal preference based on experience. The more fimiliar they are with a certain type, the better they can judge the correct exposure.

Polaroid film is mainly used by professional architectural photographers for quick on-the-job-testing.

Polaroid backs are available in Black and White and in colour. The colour is quite seductive, it has different characteristics from the transparency material for which it is a test. Black and White Polaroids are rather more economical and give all the exposure information a photographer may need.

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3. LIGHTING

The two main kinds of lighting used are available light and supplement lighting.

The term "available light" is used to describe all the light from whatever source, natural or manufactured, that is not introduced by the photographer. Available light is divided into three groups, namely daylight, tungsten light and fluorescent light.

3.1 DAYLIGHT

The major source of available light that photographers encounter is daylight.

The most obvious way to control the effect of daylight in an interior or exterior is by carefully selecting the right time of the day during which to photograph.

Before doing an architectural shot, it is essential to visit the building you're going to photograph to select the right time of the day.

3.2 TUNGSTEN (INCANDESCENT LIGHT)

Tungsten is much the same as daylight. Both are perceived by the film in the same way as by the eye.

Two kinds of film can be used when using tungsten light, namely daylight film and tungsten balanced film.

Daylight film will give a yellow cast when used and when tungsten balanced film is used, a small area of daylight may appear blue.

There are two disadvantages when using tungsten light: Firstly the generation of the heat and secondly the fact that tungsten light is a fairly high energy user.

3.3 FLUORESCENT

Another available light source is fluorescent light that is more difficult to deal with, since film is normally not balanced for this type of lighting and makes corrective filtrations mandatory. Fluorescent light is therefore not compatible with either daylight or tungsten.

There is a wide variety of fluorescent tubes in use. The light they produce is very linear and very diffused. When the tubes are visible they can produce quite a glare.

Fluorescent lighting is also known as discharge lighting. The tubes contain mercury vapour in combination with a fluorescent coating on the inside of a glass tube. Depending on the nature of the coating, the quality of light can vary substantially.

The wavelength of fluorescent light is totally unlike that of either daylight or tungsten, which is the basic reason why film sees it so differently. A rough classification of fluorescent tubes exists which categorizes the light they emit in various degrees of warmth or coolness and most tubes have the designation of warm white or cool white.

Supplemental lighting can be divided into two basic categories: Electronic flash and tungsten lamps.

3.4 ELECTRONIC FLASH

Suitable electronic flash units can be subdivided into two basic categories, namely hand held portable units and large floor-mounted studio units.

Portable electronic flash units do not have to be mounted on or even near the camera, but a sufficiently long synch cord should provide the link between the camera and the flash. Only the more powerful portable units may be capable of lighting a room and then only in combination with a small or intermediate camera like the 35 mm or the 120 mm. These units are usually powered by dry cells or rechargeable batteries, some types may also use AC sources.

In order to compare or rate the potential light output of a portable electronic flash unit, a guide number is provided by the manufacturer. For a particular film speed this guide number, when divided by the distance of the subject from the flash, provides the aperture for correct exposure, for example, a guide number of 110 in conjunction with a 10-foot flash to subject distance would indicate an aperture of f11.

The range of studio type electronic flash units varies even more widely than the portable type. These models usually have multiple sockets permitting the use of two or more flash heads. Each flash head may then be placed in the optimum position to produce the desired effect. The light output is then usually measured with a lightmeter (incident light meter). These meters will indicate an aperture setting for a given film speed.

The studio type electronic flash uses regular AC current and may take several seconds to attain maximum output level.

These large studio units are essential when the photographer has to use the large format camera (4 x 5 and larger). The light output, from whatever size flash unit, will determine the lens aperture for any particular film sensitivity or speed rating. greater the distance the flash has to travel, the the aperture of the lens needs to be to correct exposure.

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The duration of the flash is very short, even shorter for the smaller portable units, and longest for the studio units when used at full power, ranging between 1/50 000 second for the former to 1/1 000 second for

the latter. Since these speeds far exceed the range of shutter speeds most frequently used when photographing an interior partially lit by natural sources, the duration of shutter opening will be unaffected by the use of electronic flash.

Another advantage of the electronic flash is the fact that it generates comparatively little heat. When fired continuously at high output levels it certainly will heat up, but under normal circumstances of an interior shoot, there is really no reason to shoot at such a fast rate.

The greatest single disadvantage of electronic flash is that the photographer cannot see the result on the job. Even with studio style units equipped with modeling lights that simulate the flash, the ratio of their output to the available daylight is very different and can only indicate the roughest equivalent to the actual flash. Most professionals therefore use Polaroid tests to help them to achieve the right balance between available light and supplemental light.

3.5 TUNGSTEN LAMPS

Tungsten light is more flattering than many of the alternatives. There is a very high degree of control with this type of light.

Reflectors can be used to control the light by diffusing, softening or altering it. For diffusion purposes, umbrellas are used (they come out in a wide variety of shapes and sizes).

Light bounced into a large white umbrella will illuminate a room in much the same way a window might, preserving a natural look and avoiding deep shadows. The larger the umbrella, the less apparent is the direction from which the light is being introduced. Umbrellas have the great advantage of being collapsible, light and easy to transport.

Regular tungsten bulbs have limited life and are also fragile. As the lamps get older, their light output diminishes and the colour temperature drops, becoming visibly yellow. Therefore tungsten-halogene or quarts light are sometimes used (a higher efficiency is attainable and the colour temperature remains constant).

When using tungsten, it is essential that care should be exercised, extra fuses and extra long extensions should be carried with at all times. The extensions are very useful when distant sources have to be tapped.

4. COMPOSITION

The subject of composition in photography is highly complex and also very personal. Taste varies widely and few people will have exactly the same priorities.

The interior photographer, Jaime Ardiles-Arce, assisted by Thomas Loney, is known for the drama of his compositions. Darkness and light are manipulated in complex ways and foreground objects are often very prominent. (Norman Mcgrath, Photographing buildings inside and out).

Eric de Mar, in his book "Photography and Architecture" (The Architectural Press, London, 1961), lists the following qualities relating to composition: contrast, repetition, balance, climax and cohesion.

Contrast, he elaborates, is between light and dark, solid and void, vertical and horizontal, rough and smooth, plain and decorated, or large and small.

Repetition helps to bring unity. Balance means equilibrium, placing of the focal climax in the right

spot, arranging the elements in the right relationship to one another.

Climax is the binding point of a composition to which all the other parts are related. The climax will be the centre of attraction and will often be subtly concealed.

Finally the cohesion depends on the above factors, but on something more - the story the creator wishes to express (the way the photograph wants to communicate).

These qualities are equally appropriate to both interior and exterior photography and also to both Black and White and colour photographs.

5. TYPES OF ARCHITECTURAL PHOTOGRAPHY

There are several kinds of architectural photography that are found. The author will name some of these and then discuss them with the aid of personal photographs.

The types are:

5.1 Day/Night

5.2 Abstract

5.3 Detail

5.4 Exteriors

5.5 Interior/Exterior

5.6 Interiors

The illustrations will be shown in the chapter of the author's personal work.

5.1 DAY/NIGHT ARCHITECTURE

Half-day, half night photographs require preparation and precise timing. When done, they are probably the most dramatic photographs of all.

The best way to do this type of architectural photography is by selecting a camera position that silhouettes the subject against the sky. It has to be kept in mind that trees and foliage will be rendered very dark unless illuminated artificially.

There are two ways that day/night architecture can be done. The first is by using only one exposure and the second is by using a double exposure.

The manner by which the first is done, is to wait until the sun sets (that is when the sky starts turning to sunset colours) and the lights of the building will be turned on. A light reading of the building and not of the sky is taken.

The second manner (double exposure) is by doing the first exposure just as the sun sets and the second when it is totally dark (when only the lights of the building can be seen).

Figure I, p. 58 of the author's personal work, shows a day/night. The author took this photograph by using a double exposure.

The building faces east and the author had to wait until the sun had set to do the first exposure. The reason being that the sun reflected into the windows as well as against the building.

The camera was placed so that the dark parts in front and to the side would lead the eye straight to the building.

This photograph was taken with the Sinar 4 x 5 camera with a 150 mm lens and the first exposure was set at f45 for about four seconds. To do the second exposure the author had to wait for total darkness. Then a light reading of the lights of the building was taken, which was f45 for eight minutes.

5.2 ABSTRACT

When doing abstract photography, certain designs lend themselves to an unusual approach, a visual point of view that might be less appropriate with more conventional subjects. Such photographs are not normally included in the documentation of a project but are valuable for editorial purposes.

Abstract photographs should be capable of intriguing the viewer in visual terms. A photograph in this category should be considered an extra dividend rather than a major objective. Only if the subject itself is abstract, might abstraction be considered a straight forward interpretation that will convey the design philosophy.

Figure II, p. 60 shows an abstract photograph taken with the Sinar 4 x 5 camera with a 135 mm lens. The photograph was taken from directly below a stairwell. Because of the lack of light underneath the author had to use flash light balanced with daylight.

The photograph was done in the following way: The author used Fujichrome (daylight film). Three portable electronic flashes were used on full power to light the dark parts.

The author first took a light reading of the daylight coming in through the upper window. It gave a reading of f45 at 1/8 of a second. To balance the flashes with the daylight, the author had to flash twice to give again a reading of f45, which resulted in the final shot being done at f45 1/8 of a second.

5.3 DETAIL

Detail photography is when only a certain part of a building is portrayed. The reason for this is to see what kind of materials were used - was it bricks, stone or glass; how does the window and door designs fit in the building; and what kind of structure does the building have.

For this reason, architects also like detail shots for doing surveys of a building. Detail shots should contain every bit of detail a person can ask for. As a person controls the camera it is his/her decision on how the detail shot is done.

Figure III, p. 62 portrays the structure of the building. This photograph was taken in the morning while the sun was still to the side of the building. (It allows the shadows to reveal the building's shape).

The author used a 35 mm camera and the type of film she used was XP 2.

5.4 EXTERIORS

The style and purpose of a building should be bourne in mind when choosing the viewpoint, lighting and weather conditions for its photography.

When taking pictures in the sunshine, the choice of the time of day, and hence the angle of the sun, will considerably affect the way the shape of the building is recorded. With the sun behind the camera a building will appear flat and almost two-dimensional. It is much better to take the photograph when the sun is to one side, allowing shadows to accentuate the building's shape.

By comparison with many other photographic subjects, buildings are large and often in a confined space, making the possession of a wide angle lens almost essential. When space around a building is not limited, allowing freedom of viewpoint, the choice of lens focal length together with camera position can be used to control the perspective of the picture and the

way the building appears in relation to objects in front or behind it.

Problems that may occur when photographing tall buildings are that of "converging verticals" caused by tilting the camera to include the top of the building. This can be overcome by finding a higher viewpoint, an adjacent building or by using a perspective control lens or a viewcamera with a rising front.

When the author does exteriors she mostly uses a Sinar 4 x 5 camera and before she takes a photo she visits the setting to take a close look at the building. The author then decides on the angle and the time of day the photo should be taken.

For the photo of Figure IV, p.64, the author chose the early morning while the sun was still to the side of the building. The angle of the sun caused a lot of shadow areas in front and the left inner side of the building. The way the author solved this problem was by using light balanced with daylight. The flashes were only used to light the darkened areas. It gave a light reading of f32. The daylight balanced to give a reading of f32 1/8 of a second.

The author used a Sinar 4 x 5 camera and because of the confined space, a 75 mm lens. Fujichrome film was also used.

5.5 INTERIORS/EXTERIORS

With this kind of interior, the challenge is to get just the right exposure balance between the inside and the outside light. Too much brightness inside gives an unnatural look, and little light can result in a gloomy, unappealing photograph.

The daytime exposure should look brighter than the interior. It is the level of ambient light inside, however, that dictates the combination of shutterspeed and f-stop. The amount of illumination provided by the flash light determines the aperture of the lens according to the particular sensitivity of the film being used; the aperture may change as the flash output is varied.

If a small aperture is required; more supplementary lighting will have to be used. The most common problem is the availability of sufficient electronic flash output. Most powerful flash units are designed for studio use and are heavy and expensive. Smaller flash

units may be flashed more than once if immobile objects are in the photograph. If the outside level changes substantially during photographing, the exposure may require re-testing.

The next photograph (figure V, p. 66) was done with the Sinar 4 x 5 camera with a 75 mm lens. Daylight film (Fujichrome) was used as well as portable electronic flashes (Broncolor impact) to light the interior.

If the composition of a photo does not feel or look right, it is the photographers choice to change it according to taste. This interior had too many pieces of furniture, so the author re-arranged the whole interior before doing the shoot.

The shoot was done as follows: A light meter reading of the flashes were taken (f22). To balance the daylight with the flashes, the light outside also had to give a reading of f22 1/30 of a second.

Figure VI, p. 68 was done in much the same way as figure V, except for the use of five instead of three flashes. Another lens was also used, namely a 90 mm lens. In this case the meter gave a reading of f22 1/30 of a second.

The way the beams in the roof flow, leads the eye right into the photograph.

5.6 INTERIORS

When shooting interiors, available light or supplementary lighting can be used.

Photographing by available light (light coming through the windows) can sometimes be the best way of taking them, as they will be portrayed in the way in which they are designed to be seen. Although due to limitations of the contrast handling characteristics of the film this is not always possible. In which case it will be necessary to resort to artificial lighting.

The type of lighting the author uses most, that is when it is not possible to use available light, she uses supplementary (flash) lighting. The reason being that the dark places in the photo needs detail. Figure VII, p. 70 shows an interior.

The author could have used available light, but because of the lack of light to light the whole area, she had to use flash light.

A Sinar 4 x 5 camera with a 75 mm lens was used as well as three portable flash units. The reason why the author used a 75 mm lens was because of the lack of space behind and in front of her. The flashes were placed firstly to light the plants on the left and the doorway. The second to light the centre parts and the passage and the last flash to light the lounge suite in the room behind.

Figure VIII, p. 72 shows an interior done by available light (daylight) balanced with flash light. The daylight was not enough to light the entrance, so the flashes were placed firstly to light the doorway, secondly to light the ceiling and thirdly to light the columns on the right side. The flashes gave a light meter reading of f22. In order to balance the daylight with the flashes, the author had to shoot on a 1/4 of a second.

The last photograph was also done by the Sinar 4 x 5 camera with a 75 mm lens. In both cases a daylight film was used, namely Fujichrome.

6. THE AUTHOR'S APPROACH TO ARCHITECTURAL PHOTOGRAPHY

Architectural photography is a very interesting field of photography in the sense that it differs for example, from advertising, where a shoot can be done any time of the day (studio work). For architectural exteriors and sometimes interiors, mainly if your are doing interior/exteriors, the way the sunlight falls or the weather conditions play an important role. If one of these factors are not correct, your shoot can be cancelled.

The main lighting techniques the author uses in architectural photography are available light (daylight and tungsten) and supplemental light (flashes). A combination of both are often used.

The kind of flashes the author uses are Broncolor impact flashes which work with electricity. They are not that heavy or difficult to handle, so the author can take them basically to any place she wants to. The author has to remember to take along spare flash tubes, an extension cable and double adaptors. It is

not appropriate to ask for extension cables or double adaptors, for a professional photographer has to carry these things at all times.

The author enjoys doing a combination of interior/exterior. It is not always interesting to see only the inside of a building. If it is a "nice" interior it always makes a person curious as to how the outside looks. The author also likes using plants and trees (living things) in her photos. She feels it gives more life to architecture - it does not give the feeling that the building is lonely and desolated.

For most of the author's photographs, she uses the Sinar 4 x 5 camera. She prefers it because she can always correct the verticals with the rising front. Lenses that she uses with this camera are the 65 mm, 75 mm, 90 mm, 135 mm or the 150 mm. Other cameras such as the 35 mm or the RB67 are used only when doing abstract or detailed architecture.

The author enjoys doing colour photographs, because you can see exactly the way the interior or exterior looks. She only uses Black and White for dramatic results, for example when shooting abstract or detailed architecture.

The type of films the author uses most often are the Fuji negative or Fujichrome, because they have vibrant saturated colours. She also sometimes uses Agfa film because it lends more of a warm yellow colour to the photograph. When the author uses Black and White film, she prefers to use XP1 or XP2. It gives a fine grain and is quite a fast Black and White film.

7. PERSONAL WORK

FIGURE I
THE AUTHOR
DAY/NIGHT
Sinar 4x5 camera, 150mm lens

FIGURE II
THE AUTHOR
ABSTRACT ARCHITECTURE
Sinar 4 x 5 camera
135 mm lens.

FIGURE III
THE AUTHOR
DETAIL ARCHITECTURE
35 mm camera.

FIGURE IV
THE AUTHOR
EXTERIOR
Sinar 4 x 5 camera
74 mm lens.

FIGURE V
THE AUTHOR
INTERIOR/EXTERIOR
Sinar 4 x 5 camera
75 mm.

FIGURE VI
THE AUTHOR
INTERIOR/EXTERIOR
Sinar 4 x 5 camera
90 mm lens.

FIGURE VII
THE AUTHOR
INTERIOR
4 x 5 Sinar camera
75 mm lens.

FIGURE VIII
THE AUTHOR

FIGURE IX
THE AUTHOR

FIGURE X
THE AUTHOR

FIGURE XI
THE AUTHOR

FIGURE XII
THE AUTHOR

FIGURE XIII
THE AUTHOR

8. CONCLUSION

Architectural photographers must remember that there are certain tasks they have to accomplish. That is to reproduce a print of sufficient physical quality so that one's work is taken seriously, to get ahead of one's fellow photographers by some aesthetic act, and to remain in the public eye thereafter with a recognizable individual style.

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